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STATE OF THE FOOD INDUSTRY

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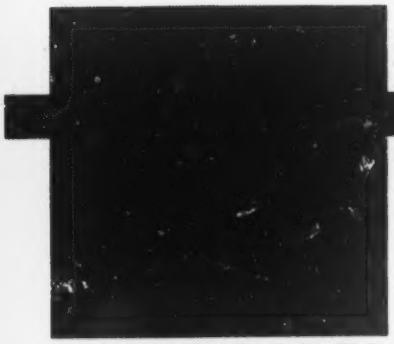

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The food industry remained the darling of Wall Street, as food stocks outperformed market averages for the ninth consecutive year, according to *FE*'s annual State of the Food Industry report.
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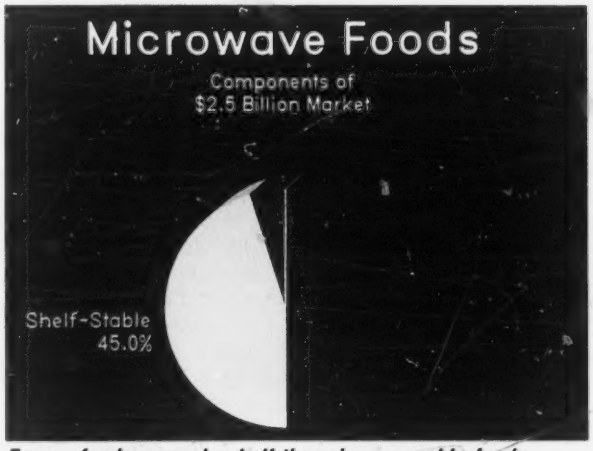
Microwave mania holds its grip

Microwaveable foods continue to be irresistible to U.S. consumers who show increased willingness to pay premium prices for convenience. Microwave food sales totaled $2.5 billion in 1989 and are expected to reach $3.9 billion in 1994, according to FIND/SVP, New York-based research firm.

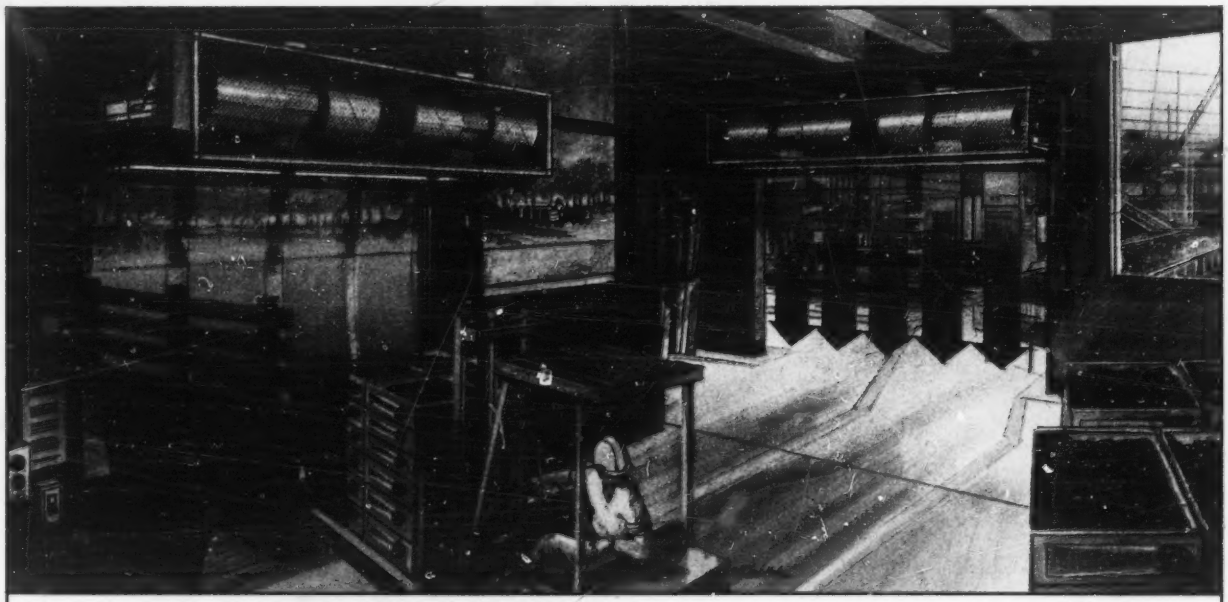
Approximately 70 percent of consumers surveyed reported owning a microwave oven with the highest penetration reaching the nation's heartland. FIND/SVP identified breakfasts and snacks as being peak times for which consumers are willing to pay premium prices. ***Popcorn is the largest single category*** *with retail sales of $740 million. For further information, contact FIND/SVP at (212) 645-4500.*



Frozen foods comprise half the microwaveable foods currently on the market.

Sous vide launched in Virginia

Vie de France Culinary, division of Vie de France Corp., McLean, VA, launched its sous vide product line with the opening of its plant in Alexandria, VA in late April. The 30,000 square foot plant will produce 70,000 meals per day.



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MARGIE
PATRICIA M.

Consumers are spending a declining percentage of their personal consumption expenditures (PCE) on food and beverages, both in current dollars and when adjusted for inflation. Share of PCE spent on food/beverage away from home rose slightly in current dollars, and remains unchanged after adjusting for inflation. (Source: U.S. Department of Commerce.)

As shown in the operating table, the performance of publicly-held food-processing companies tracked by *Value Line Investment Survey* (New York City) gained consistently since 1985 and indeed throughout the decade. The 1989 slump in earnings-per-share gains—still up 8 percent over '88—was only 1 percent off the overall industrial composite of 9 percent and reflects restructuring charges taken by several large firms in '89. Examples:

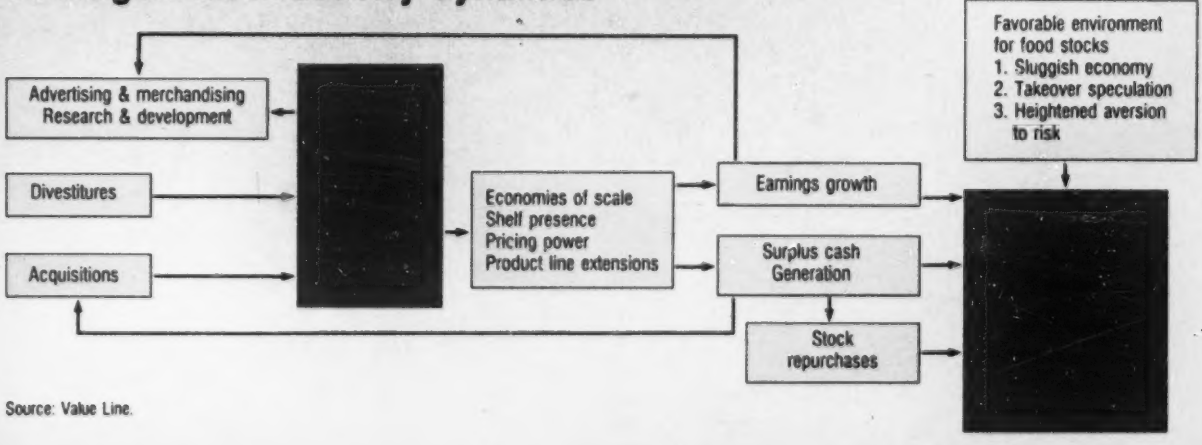
- Campbell Soup Co. took a pretax $343 million charge to cover the costs of closing and consolidating older facilities, plunging '89 earnings-per-share to 10 cents from $2.12 in '88. "Much of the downside is behind us...and we are now healthy, growing and ready for the future," Campbell USA President (and interim co-CEO) Herbert M. Baum told reporters at a

CEO E. J. Vesper told shareholders at the company's annual meeting April 20.

Average annual food-industry profit growth from 1988 to 1990 should run a respectable 13 to 15 percent, *Value Line* reports, well above the 4 percent projected for the industrial composite. In 1990, and the industry will maintain that 15 percent average annual growth over the next three to five years. *Value Line* classifies Philip Morris as a tobacco company and doesn't include the firm in its composite food-industry statistics, but forecasts operating profit at Philip Morris' Kraft General Foods unit to grow in line with the rest of the food industry by about 15 percent in 1990.

- *Restructuring*, as food companies refocused on core businesses and divested the diversifications of the '60s and '70s. The restructuring boom is

Packaged food industry dynamics

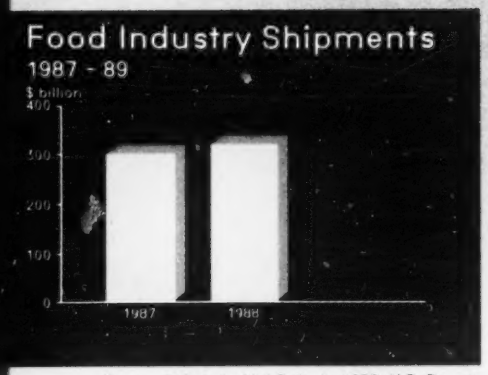


Source: Value Line.

U.S. investment in foreign food industry vs. foreign investment in U.S. food industry (in millions of dollars)

	1983	1984	1985	1986	1987	1988
United States:						
Direct investment position	7,661	8,156	9,252	10,968	12,643	13,121
Foreign:						
Direct investment position	7,447	8,270	10,710	12,147	16,004	16,437

Source: U.S. Dept. of Commerce.



Source: U.S. Industrial Outlook, 1990, U.S. Department of Commerce.

winding down, *Value Line* believes; only a few food processors are still restructuring candidates. Examples: Castle & Cook spun off Dole to its shareholders as a separate company early this year; Quaker Oats announced late April it would do the same with its Fisher-Price toy division; Gerber divested its child-care unit and may put its apparel division on the block.

● *A focus on building brand strength* through acquisitions, divestitures, new-product development and heavy promotional outlays. Brand strength translates into economies of scale, more shelf space in the supermarket, pricing flexibility and line extensions, which in turn ultimately translate into earnings growth, surplus cash (which can be used to repurchase stock) and superior stock performance (see diagram). Brand strength further boosts the processor's "clout" in negotiating the slotting allowances and promotional costs demanded by retailers to get a new product on the shelf. According to *U.S. Industrial Outlook 1990* (Department of Commerce), "these fees, which reduce manufacturer's returns, are threatening to become a permanent part of the price structure and would lead to generally higher...food prices." Some supermarket chains last year even began demanding "failure fees" if a new product is discontinued. Outlook: "In 1990, food manufacturers are likely to launch some sort of assault on slotting fees and begin emphasizing brand-name development rather than continuing to use consumer and trade promotions as their primary tools to gain shelf space."

● *Product proliferation* to fill niches and meet consumer demand for convenience has increasingly fragmented the marketplace with opportunities for value-added niche products which attract less competition, allow greater pricing latitude and command higher margins. According to Marketing Intelligence Service (Naples, NY), new product introductions have hovered around the 3,500 per annum mark since 1986.

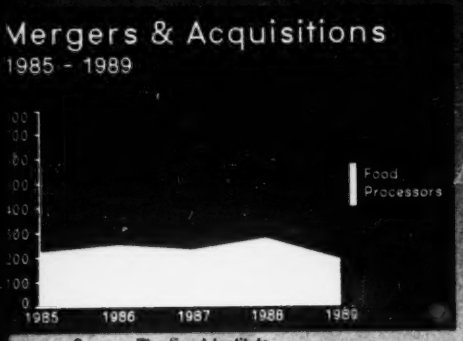
● *More capital spending* to automate and modernize plants while shutting-down outmoded facilities.

According to *Industrial Outlook*, however, the pace of capital spending slowed dramatically late in the decade: Capital outlays crept up only 1.3 percent per year to $7.2 billion for the period 1982-87, as compared to an annual rate of 9.8 percent and a total of $6.7 billion during 1977-82—an era of high interest rates and inflation. Reason for the slowdown: heavier debt, incurred to either finance leveraged buyouts (LBOs) or to defend against hostile takeovers.

Mergermania cure?

The "go-go '80s" climate of giant, debt-financed LBOs and megamergers seems to be over for the food industry, and for American industry at large. According to The Food Institute, the total number of food-industry mergers and acquisitions fell to 556 last year from 652 in 1988, 599 in '87 and the all-time high of 724 in 1986. Food-processing mergers/acquisitions declined accordingly: 195 last year as compared to 282 in '88, 235 in '87 and 257 in '86. Biggest deals of '89:

● Tyson Foods' $1.5-billion hostile takeover of Holly Farms, which according to Chairman & CEO Don Tyson should boost Tyson's 1989 record sales of $2.54 billion to nearly $4 billion in fiscal '90. Tyson described the acquisition as "a great fit...Since most Tyson products are



Source: The Food Institute.

end.

- Nestle's acquisition of the *Baby Ruth* and *Butterfinger* candy brands plus the Pearson candy business from RJR Nabisco for about $370 million.
- Cadbury Schweppes acquisition of the *Orange Crush* and *Hires Root Beer* brands from Procter & Gamble for $220 million.
- The merger of Molson and Carling O'Keefe into Canada's largest brewer (with a 53 percent share of the Canadian market versus Labatt's 43 percent) and the sixth largest brewer in North America.

One deal that *didn't* happen: Coors' $425-million acquisition of Stroh, "but discussions continue with Stroh and other companies," said a spokesperson at Coors. Both Heileman and Stroh are in trouble, so analysts look for further brewing-industry consolidation soon.

The October '89 collapse of the junk bond market in the wake of the failed UAL takeover, the Campeau bankruptcy and the indictment of junk-bond king Michael Milken – followed by the Drexel Burnham belly-up and Milken's guilty plea bargain – cooled takeover fever.

Furthermore, few major takeover targets remain in the food industry, despite speculation surrounding the intentions of the Dorrance family (which controls 58 percent of Camp-

the company.")

"Debt is falling out of fashion in the corporate world..." concludes David M. Blitzer, vice president and chief economist at Standard & Poor's Corp. "Although too much debt will likely burden too many balance sheets to designate the 1990s 'the equity decade,' the trends are pointing that way. Debt will not be abandoned in the 1990s, but neither will it be used with quite the license of the 1980s. Investors are coming to realize that junk bonds were not misnamed after all."

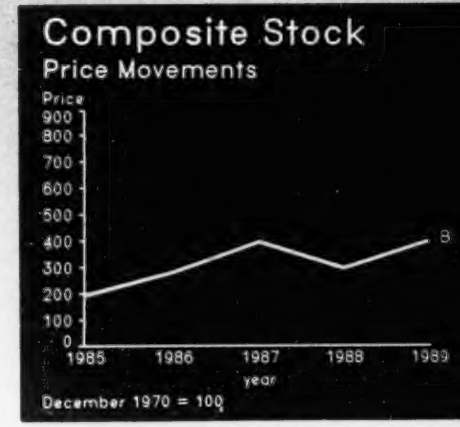
As a result, says *Value Line*, takeovers and share repurchases are now more costly, especially for food-processing companies whose stock is trading at an industry average of 20 percent above the market price/earnings multiple. Most food companies are also more highly leveraged today and thus have less financial flexibility.

Food processors, however, will continue to seek out smaller niche acquisitions. The master of this strategy is Borden, which has acquired 78 small-to-medium size firms since March of '86 with focus on growth in six areas: dairy, snacks, pasta, "niche grocery," non-food consumer products and films/adhesives.

Borden acquired seven food firms last year, including United Maple Products (syrups) and Catelli Inc. (pasta) from John LaBatt, the Gross and Kuchern-Betz bakeries in West Germany, and Moore's Quality Snack Foods (Bristol, VA).

Other notable niche acquisitions of 1989:

- Whitman's acquisitions of Orval Kent (fresh salads) and Van de Kamp (frozen foods).
- International Multifoods' acqui-



Ten-year performance of 12 major food processors compared to NYSE composite index exemplifies how food stocks outperformed the market during the 1980s.

sition of J&C Creative Foods, which was merged with IM's SeaFest Products unit to create the the largest U.S. manufacturer of surimi products.

• Wm. Wrigley's acquisition of Reed Candy Co.

Earlier this year, Hershey acquired Ronzoni Foods from Philip Morris. This boosts Hershey's share of the pasta market to 27 percent, close to leader Borden's 32 percent.

Foreign invasion

Spurred by the weak dollar and the industry's strong financial performance, foreign investment in the U.S. food-processing industry continues to outpace U.S. investment in the food industry abroad. According to Commerce, foreign investment in the U.S. food industry reached $16.4 billion at the end of 1988, compared to U.S. investment of $13.1 billion abroad. European Community (EC) nations account for the lion's share of foreign investment: $12.4 billion worth, followed by non-EC Europe (mainly Switzerland) with $2.5 billion, Canada with $531 million and Japan with $382 million. Of EC ownership, the Netherlands accounts for $5.8 billion and the U.K. $5.2 billion. U.S. food companies hold their largest position – $7.2 billion worth – in the E.C., of which $2.7 billion is invested in the U.K. and $1.4 billion in The Netherlands. U.S. investment in Canada is $2.2 billion, in Japan $382 million.

Composite statistics: public food companies

	1985	1986	1987	1988	1989[1]	1990[1]
Sales ($ billions)	77.9	83.8	103.4	111.9	126	143
Operating margin (%)	10.4	11.0	10.4	10.7	11.0	11.2
Net profits ($ billions)	3.12	3.62	4.19	4.91	5.29	6.44
Net profit margin (%)	4.0	4.3	4.1	4.4	4.2	4.5
Earnings per-share gains (%)	+9	+11	+13	+18	+8	+21

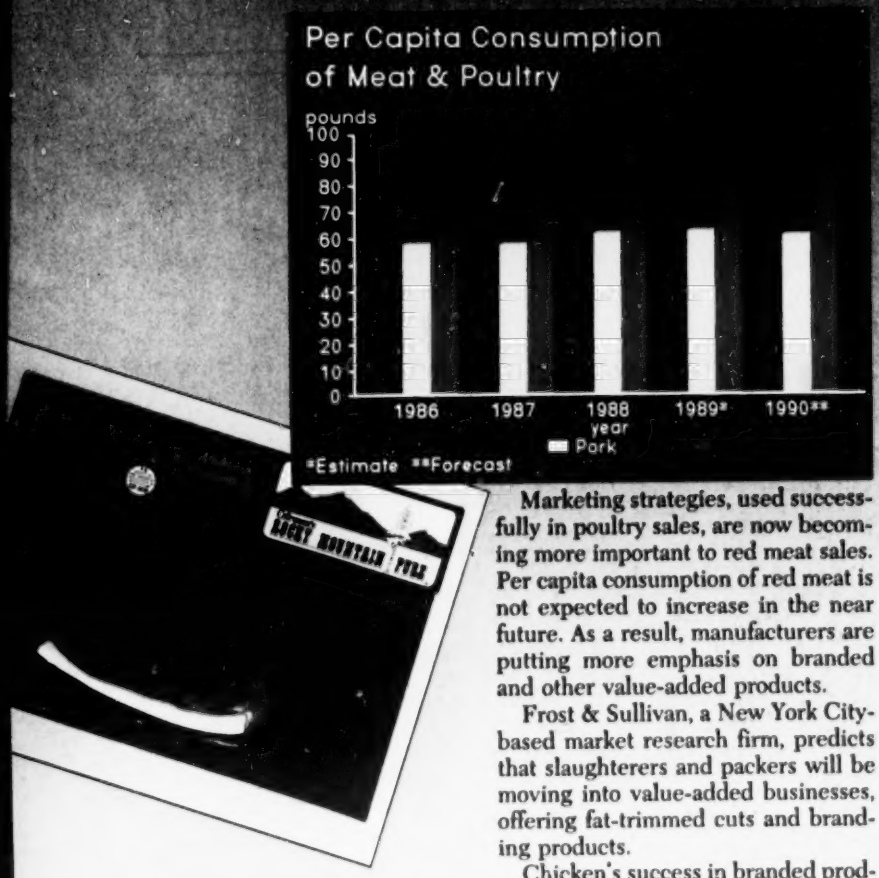
[1]Estimated

Source: Value Line Investment Survey.

Growing globalization of the food industry – spurred by EC 92, the expansion of free Europe to the East, the U.S./Canada Free Trade Agreement and the rising economies of the Pacific Rim – prompted U.S. acquisitions and joint ventures abroad. General Mills, for example, set up a joint venture with Nestlé to produce breakfast cereals in Europe, using Nestlé's local marketing expertise and distribution channels. ConAgra established ConAgra-Nissui, a joint frozen-food venture in Japan "which will serve as a model for future deals in Asia and Europe," says *Value Line*. Heinz, which derives more than 40 percent of its sales and profits from foreign operations, hopes to consolidate ingredient sourcing and production for three product lines it considers pan-European – ketchup, *Weight Watchers* and baby food – yet tailor these products to diverse ethnic tastes and eating habits.

Regulatory uncertainty

Meanwhile, chaos reigned on the supermarket shelf and the airways as health claims proliferated in the absence of a federal regulation and several states took the initiative in regulating health claims. *Industrial Outlook* estimated that one-third of 1988's $3.6 billion worth of food advertising contained some sort of health message. FDA, whose proposed health-claims regulation of August 1988, languished for more than a year and died at the Office of Management & Budget (who considered it too restrictive), launched a round of public hearings last October preparatory to developing new labeling regulations – including health claims – and in February of this year published its proposed new health-claims regulation, extending the commentary period through May 15. Food processors were dismayed that FDA's proposal fails to mandate federally preemption where state regulations conflict. FDA will probably publish a new health-claims regulation late this year. Health-claim confusion will thus continue through most of 1990.



As red meat consumption continues to fall, meat manufacturers must rethink their marketing strategies. Branded beef may be one answer. Sources: Coleman Natural Beef (photo); U.S. Department of Commerce and U.S. Department of Agriculture (chart).

Marketing strategies, used successfully in poultry sales, are now becoming more important to red meat sales. Per capita consumption of red meat is not expected to increase in the near future. As a result, manufacturers are putting more emphasis on branded and other value-added products.

Frost & Sullivan, a New York City-based market research firm, predicts that slaughterers and packers will be moving into value-added businesses, offering fat-trimmed cuts and branding products.

Chicken's success in branded products, based on convenience for consumers and a fresh image, has led meat makers to try the same. But so far it has not been successful for meat marketers such as Excel, one of the first to market branded beef, (see *FE*, July 1988, page 76). Meat companies need to portray the same image as chicken or fish—red meat is convenient and nutritional.

The value of shipments by the meat and poultry products industries rose an estimated 5.4 percent in 1989 to $86.6 billion, according to the *U.S. Industrial Outlook*. Adjusted for inflation, shipments were flat. 1987 was the first year per capita consumption of poultry was greater than beef. And between 1987 and '89, per capita consumption of poultry grew 8 percent.

The estimated dollar value of red meat shipments rose 5.8 percent in '89, says the Department of Commerce (DOC). The red meat industry is expected to continue to improve profitability through product innovations and closing inefficient plants. The number of federally-inspected meat plants dropped 7 percent between '87 and '88, but the number of establishments with both meat and poultry inspection grew 48 percent.

The poultry industry is becoming more concentrated. According to DOC, processors are building more hatcheries and plants and are buying their competitors. Eight years ago, 127 companies raised or sold chickens, now only 45 remain, with Tyson, ConAgra, Gold Kist, and Perdue controlling nearly half of the production.

Poultry continues to gain with new products such as microwaveable chicken wings and chicken fried steak. Poultry accounts for 38 percent of all meat consumed, according to the Outlook. Shifting lifestyles and price both aided poultry's rise.

Pork consumption is rising slightly, and some large food companies such as Tyson, Cargill and Central Soya would like Americans to see more pork in their future. Yearly per capita pork consumption in the U.S. is just over 60 pounds, while in Europe, it's closer to 77. These companies are working on producing leaner hogs to appeal to the health-conscious.

More microwaveable meat products are on the supermarket shelves according to an American Meat Institute (AMI) poll. "Consumers can expect to see more refrigerated fresh meat and meat-based products that taste better than similar products now available in cans and in the freezer," said Tom Duesler, executive vice president at Oscar Mayer.

As for the future, constant dollar shipments of red meats are expected to remain flat for 1990. Constant dollar shipments of poultry are expected to grow 6.7 percent.

BREAKFAST FOODS

Product shipments of cereal breakfast foods (in millions of dollars)

	1986	1987	1988[1]	1989[1]
Total	4,665.0	5,080.4	5,553.9	6,416.2
Ready to serve:	4,425.6	4,711.1	5,153.9	5,915.3
Corn	1,252.6	1,302.3	1,448.1	1,664.7
Wheat	1,296.4	1,359.6	1,520.3	1,749.4
Oat	686.1	706.9	788.6	902.9
Rice	517.3	518.1	553.2	604.7
Mixed grains	673.8	824.2	843.7	993.6
Hot Cereals:	221.0	353.4	382.6	481.7
Oat meal	144.4	120.5	124.7	144.5
Instant	–	163.7	187.1	258.2
Farina	67.5	60.2	61.3	67.4
Mixed grains	9.1	9.0	9.5	11.6
Unspecified items	18.4	15.9	17.4	19.2

[1]Estimate

Source: U.S. Department of Commerce, Bureau of the Census and International Trade Administration.

One of the biggest selling cereals of 1989 was Apple Cinnamon Cheerios. (Source: General Mills.)

In 1989, constant dollars in shipments of the cereal breakfast food industry grew 4.5 percent, according to the *U.S. Industrial Outlook*. Higher variable costs drove up producer prices in 1989—ready-to-eat cereals went up 12.7 percent while hot cereal gained 20.7 percent and retail prices jumped 25.6 percent.

According to the Department of Commerce (DOC), most ingredient prices rose, except for oat and rice. The cost of packaging prices also went up in 1989, accounting for over 25 percent of the value of the materials consumed by the industry.

Cold cereal consumption grew only 0.6 percent in 1989, with the group consisting of bran, multigrain and fiber cereals gaining 3.8 percent. On the other hand, rice products consumption went down 3.9 percent. Consumption of hot cereal also dropped 5.1 percent. Only instant and mixed grain remained stable. Despite the fact that gains in consumption were small, retail prices grew 15.5 percent in value of total products shipments for 1989. The ready-to-eat category grew 15 percent and the value of hot cereals jumped almost 26 percent last year.

Health claims on packaging made a big splash in '89 as manufacturers introduced products containing rice bran, oat bran and multi-grain combos purporting to reduce cholesterol.

One cereal, *Benefit*, from General Mills, contained psyllium grain, and claimed on the label that two servings daily reduced cholesterol by nine percent in people who also ate a low-fat diet. This was followed by Kellogg's introduction of *Heartwise*, which also contained psyllium. Procter & Gamble complained that its laxative, *Metamucil*, which contains psyllium, could not claim cholesterol-reducing properties, but the cereals could.

General Mills looked to boost its marketshare worldwide by entering into a joint venture with Nestle S.A to create a major breakfast cereal in Europe. General Mills currently has about 25 percent of the U.S. market for ready-to eat cereals.

Kellogg's has 41 percent of the U.S. market, but its overseas market is growing twice as fast as its U.S. market, according to a report in the *Business Week Top 100*.

The frozen breakfast market is making tremendous gains according to Packaged Facts. Between 1987 and 1988, the segment grew close to 30 percent, probably due to the convenience factor of popping the frozen entrees in the microwave.

The 1990 outlook for breakfast cereals: estimated per capita consumption will only grow 1 percent. Cold cereal will rise 1.7 percent and hot cereal will decrease 2 percent, says DOC. Retail prices may increase due to increased packaging, labor, energy and advertising costs.

SEAFOOD

Top: U.S. per capita consumption rose in 1989, after declining between 1987 and 1988. (Source: The National Marine Fisheries Service.) Below: A healthy image, new species, aquaculture and advanced technology processing have all contributed to expanded seafood usage. (Source: Fritzsche Dodge & Olcott.)

The seafood industry has had to confront safety concerns and rising prices, resulting in a lowering of U.S. per capita seafood consumption from 1987 to 1988 after five years of increases. But as the industry has dealt with these issues, seafood consumption is rising again. The National Marine Fisheries Service (NMFS) reports 1989 U.S. per capita seafood consumption at 15.9 lbs.

The National Fisheries Institute (NFI) points out that while about 90 percent of food-borne illnesses caused by seafood have been attributed to raw molluscan shellfish (i.e., oysters, clams, mussels), scombrotoxin and ciguatoxin, the number of outbreaks reported to the Center for Communicable Diseases in Atlanta has not been increasing, despite increased consumption.

Still, the seafood industry has been working with the government to develop a mandatory federal inspection program designed specifically for fish and seafood. NFI believes a seafood inspection system should be federally funded, as are meat and poultry inspection. And it should include: certification of processing ships and plants; surveillance of operations; inspection of imports; more toxic substance monitoring; and enforcement against economic violations. FDA and NMFS announced in March that they are planning a new voluntary inspection service for fish and seafood based on the Hazard Analysis Critical Control Point (HACCP) concept, with additional parameters.

Mandatory seafood inspection to help alleviate consumers' concerns about seafood safety, and a greater awareness of the health benefits of seafood, with continued research on omega-3 fatty acids and other areas, are contributing to the growing importance of seafood in U.S. diets.

Another encouraging facet of the industry is increased exports of seafoods for the second year in a row. Exports are expected to climb to nearly $4.9 billion in 1989, according the *Industrial Outlook 1990*. This leaves the U.S. with a total marine products trade deficit of about $4.1 billion, down from $6.5 billion in 1988.

The U.S. seafood industry is also increasing aquaculture production which is now responsible for about 790 million pounds of fish and seafood annually—equal to about 5.5 percent of the total domestic supply, reports NFI. Increased aquaculture production is expected to help meet a growing demand for seafood.

Surimi usage in the U.S. is one of the success stories of the '80s. Americans consumed an estimated 135 million pounds of surimi seafood products in 1989, up from 18 million pounds in 1982, reports the Surimi Seafood Education Center of the National Fisheries Institute (Washington, D.C). Educating processors and consumers on expanded uses of surimi; a healthy image; and raising prices of seafood products have all contributed to surimi's escalated use.

USDA projects that U.S. per capita consumption of seafood could reach 17.2 pounds by the year 2000. Exports are also expected to increase—10 to 15 percent during 1990, according to the *Outlook*. And seafood product shipments are likely to show a real gain of 1.5 percent in 1990.

FROZEN FOODS

Frozen entrees and snacks

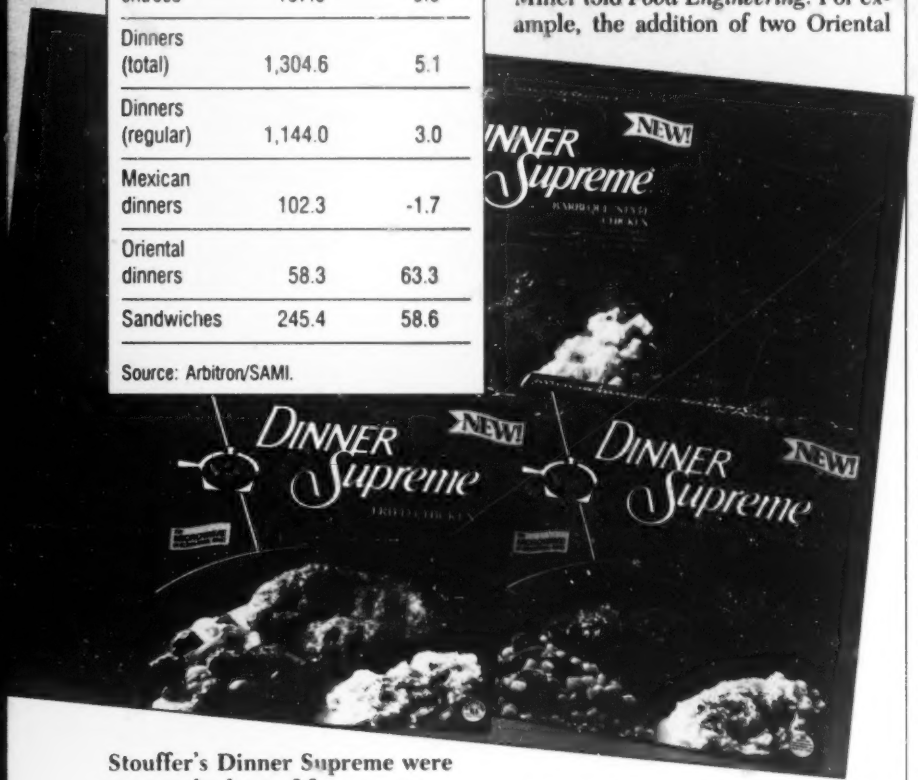
	1989 ($ value, millions)	% increase over 1988
Entrees (total)	3,218.8	1.8
Poultry entrees	1,129.2	2.4
Meat entrees	424.8	0.8
Fish entrees	120.6	-5.1
Italian entrees	824.0	-1.9
Mexican entrees	309.8	11.5
Oriental entrees	197.0	-9.0
Dinners (total)	1,304.6	5.1
Dinners (regular)	1,144.0	3.0
Mexican dinners	102.3	-1.7
Oriental dinners	58.3	63.3
Sandwiches	245.4	58.6

Source: Arbitron/SAMI.

Frozen foods were first introduced to the American market in 1930. Since then, the U.S. frozen food industry has grown to over $12 billion (the value of 1989 shipments), according the *U.S. Industrial Outlook 1990*. This amounted to a 5.4 percent increase over 1988. Adjusted for price changes, industry shipments increased by 2.4 percent.

Value of 1989 frozen entrees alone was $3,218.8 million—a 1.8 percent increase over 1988, reports Alan B. Miller, Jr. of Arbitron/SAMI (New York). And 1989 sales of frozen dinners were $1,114.0 million—a 3.0 percent increase over 1988.

"Real growth, though, will be in the 'healthy' frozen entree/dinner area," Miller told *Food Engineering*. For example, the addition of two Oriental style *Healthy Choice* dinners from ConAgra (Omaha, NE) was largely responsible for the 63.3 percent growth in sales of this category between 1988 and 1989.



Stouffer's Dinner Supreme were among the host of frozen entrees introduced in 1989. (Source: Stouffer Foods Corp.)

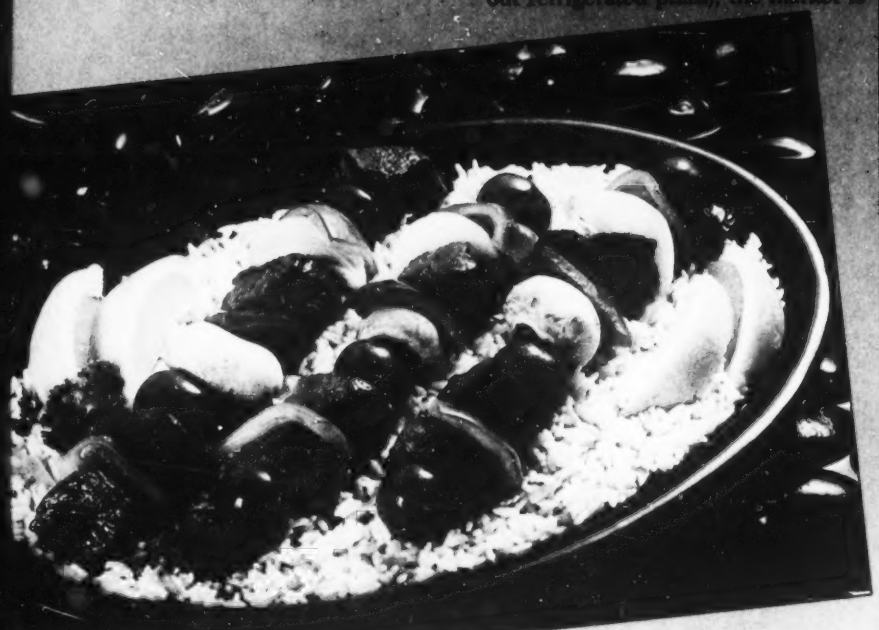
The success of ConAgra's Healthy Choice frozen entrees and dinners and Stouffer's (Solon, OH) *Right Course* frozen entrees has lured others into the "healthy" frozen food arena. Campbell Soup Co. (Camden, NJ) introduced *Le Menu* Eating Smart Dinners in Canada featuring lower salt, fat and cholesterol than the regular Le Menu line. And Kibun Products International, Inc. (Raleigh, NC) launched a line of eight health-oriented entrees—four chicken, one beef, one vegetarian and two seafood. The line averages less than 3.8 grams of fat per dish and 12 percent of total calories from fat.

Stouffer Foods Corporation is not only marketing a line of health-oriented frozen entrees, it recently announced the reformulation of its calorie-controlled *Lean Cuisine*. The company does not expect the reformulated Lean Cuisine to compete head-to-head with Right Course. Right Course is targeted at older, health-aware consumers while Lean Cuisine is aimed at younger people. The average sodium content of Lean Cuisine entrees is now 860 milligrams. When the line was introduced in 1981, each entree averaged 1,100 milligrams.

H.J. Heinz Co. (Pittsburgh, PA) is also a major player in the healthy frozen food arena with its *Weight Watchers* line. The Weight Watchers unit has grown 20 percent a year over the past five years and is expected to be the firm's largest unit by 1995.

"I believe that we are still underestimating the potential of this remarkable brand [Weight Watchers]," said Heinz Chairman/CEO Anthony O'Reilly at a March 15 meeting with security analysts.

A steady increase in frozen food sales will continue, despite competition from shelf-stable and chilled foods. And, health will be a major driving force behind new frozen foods.



Distribution problems and lack of consumer education have been major stumbling blocks to consumer acceptance of refrigerated foods. (Source: Cryovac, Div. of W.R. Grace & Co.)

[redacted]

New technologies are expected to revive the refrigerated or chilled food category. Figures on the size of the market vary, depending on how it is defined. A Michigan State University study estimates that fresh prepared foods account for about $500 million. If one includes all refrigerated meals not consumed on premise (including foods such as take-out refrigerated pizza), the market is $50 billion, with $30 billion of that in foodservice. According to Carl Randall, CEO of Culinary Brands, Inc. (Sausalito, CA) that will double in the next five to ten years. And, a "new generation" chilled foods (i.e., sous vide or modified atmosphere packaged) will create approximately a $200 million market.

The Chilled Foods Association (Atlanta, GA) defines chilled foods as "fresh-prepared, refrigerated foods that meet three criteria: 1) They are processed by performing some or all of the preparation steps traditionally done by the consumer or restaurant; 2) their freshness and wholesomeness is maintained primarily through refrigeration; and 3) they are ready to eat as purchased or with minimal preparation." This would include refrigerated entrees, prepared salads, complete meals, fresh pasta, cooked or partially cured meats and poultry, soups and sauces; but would not include milk, butter, cheese, yogurts, packaged produce, fresh or cured meats and refrigerated doughs.

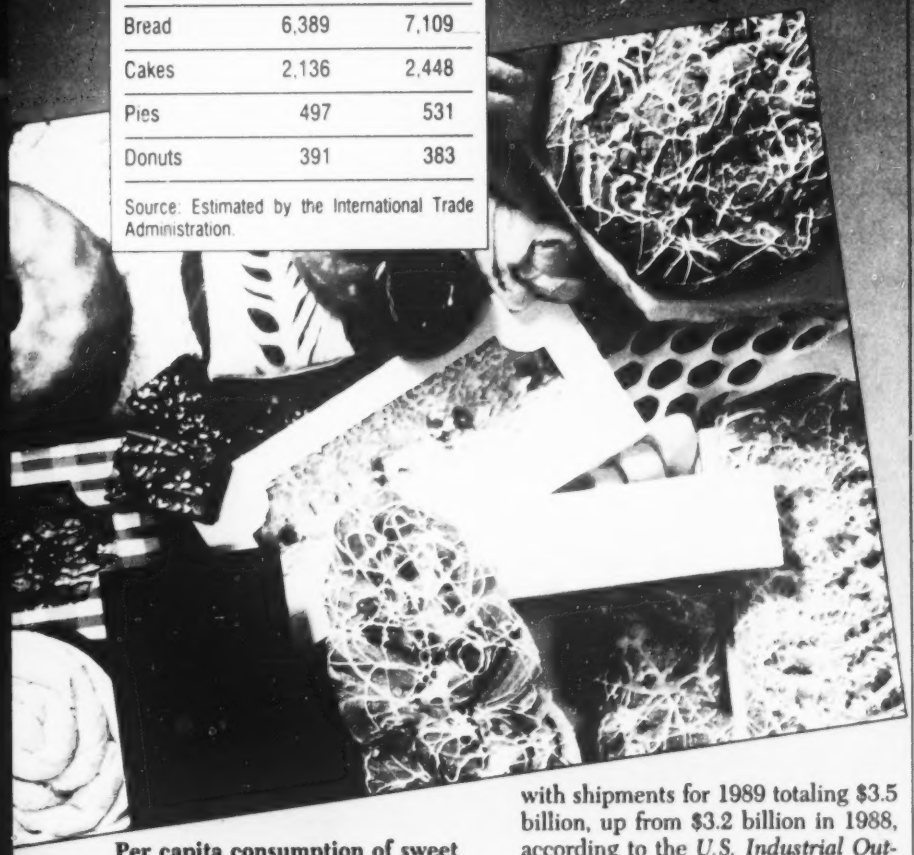
Several of the earlier players in this arena pulled product from the market due to problems with distribution. Controlling the temperature throughout distribution is critical with refrigerated foods. FreshNes™ Foods Corp., a division of Nestlé Corp. (Solon, OH), uses direct store delivery for its *FreshNes* Fresh made meals (in test market in Cleveland and Columbus, OH). Kraft General Foods (White Plains, NY) also uses direct store delivery for its *Chillery* line (in test market in Kansas, MO). Carnation's *Contadina-Fresh* line of sauces and pastas has completed its first year in national distribution.

While Culinary Brands, Inc., Sausalito, CA, recently pulled its retail line of sous vide from the market due to lack of consumer knowledge about chilled foods and distribution problems, Randall still feels that retail chilled foods will be one of the biggest growth areas in the '90s.

"As technology develops, a whole new chilled foods distribution system will develop over the next 10 years where chilled foods will be kept below 32°F but above their freezing point," predicted Randall.

Currently, Culinary's vacuum cooked products are quick frozen for distribution to its foodservice customers. "We still offer exceptional quality, but until chilled distribution systems are improved, our customers prefer to have the products frozen," Randall explained.

Frank DiGiacomo, of FreshNes, agrees that more education of consumers is needed. The company began a new ad campaign in January.



Per capita consumption of sweet baked goods increased 4.2 percent and is expected to reach 4.16 pounds per person in 1990. (Photo source: Entenmann's Inc.)

Bakery product shipments (in millions of dollars)

	1988	1989
Bread	6,389	7,109
Cakes	2,136	2,448
Pies	497	531
Donuts	391	383

Source: Estimated by the International Trade Administration.

with shipments for 1989 totaling $3.5 billion, up from $3.2 billion in 1988, according to the *U.S. Industrial Outlook*. It attributes the triumphant return of white bread to better formulations by manufacturers and its bland flavor that appeals to increasing segments of the population: old folks and kids. It further estimates that white bread will gain 5.6 percent in constant-dollar value shipments.

Sales for the entire bakery category rose to $16.9 billion in 1989, up from $15 billion in 1988, according to the Outlook. Snacking and grazing has driven consumers into the bakery section and once there, shoppers seek baked products that fit their conception of healthy foods. This explains the drop in donut shipments ($383 million in 1989 compared to $391 million in 1988) as consumers push them aside in favor of bran muffins. Although the delirium over oat bran has calmed down, the demand for bran products has remained steady.

However, sales won't be warming up in all areas of bakery. Per capita consumption of *frozen* bakery products has been melting 6.7 annually since 1982. The category is expected to make no more than a one percent gain in shipments this year. Consumers have switched from frozen pies to desserts that require less preparation, such as fresh baked goods.

Supermarket bakeries present an increasing challenge to food manufacturers who traditionally dominated the baked food segment. In-store bakery sales totaled $7.5 billion in 1989, up 17 percent over 1988, according to the American Institute of Food Distributors, Inc., Fair Lawn, NJ. The heat of competition isn't expected to let up since the number of in-store bakeries (presently at 22,288) is expected to grow by two percent. By establishing preparation areas that are visible to the shopper, retailers are imparting a perception of freshness to their products that continues to challenge bakery companies.

Some of the trendsetters in retail outlets, according to the International Dairy-Deli Association, Madison, WI include: miniature Danish, miniature muffins, gourmet cookies, and crusty breads, such as French bread or rolls.

For the first time, the Outlook has tracked bagels whose per capita consumption rose from 2.47 in 1988 to 2.86 in 1989. This year, per capita consumption is expected to reach 3.24. In addition, the soft cookie segment has been stale since the $560 million category tumbled to less than $300 million between 1984 and 1989. However, the Outlook projects that the category may be resuscitated in the future with formulations using fat substitutes such as Olestra.

SNACK FOODS

Snack food sales (in millions of dollars)

	1988	1989
Potato chips	3,598	3,917
Tortilla chips	1,844	2,104
RTE popcorn	302	368
Pretzels	470	302
Nuts	1,530	1,527
Pork rinds	171	195

Source: Snack Food Association.

While regular potato chip sales remained flat, sales of sour cream varieties increased 8.8 percent, according to SFA. (Photo source: Keebler Co.)

Jay Leno's pitch for Frito-Lay—"Crunch all you want, we'll make more" aptly describes the American phenomenon of snacking—we certainly are crunching all we want and snack food companies *are* making more. In a new study released by the Snack Food Association (SFA), Alexandria, VA, snack food sales reached $11.9 billion, up a whopping 9.4 percent from 1988.

Tortilla chips, ready-to-eat (RTE) popcorn, microwaveable popcorn, pretzels, onion rings and President Bush's favorite, pork rinds, are all posting significant gains. SFA reports 1989 sales of tortilla chips reached just over $2 million, an increase of 14 percent from 1988. Al Rickard, SFA director of communications, said low salt and no salt varieties of tortilla chips appear to be doing well, with double-digit growth being realized for ranch, salsa and regular flavors.

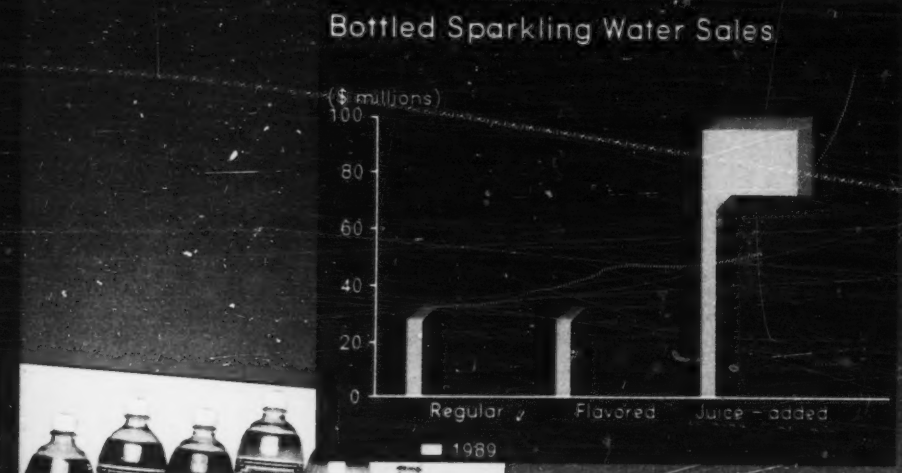
Although low oil varieties presently comprise only a fraction of the tortilla market, consumer interest has doubled market share to make low-oil tortilla chips a promising market, according to Rickard. However, he added that up to 22 percent of the sales gains made by tortilla chips during the past year have been the result of manufacturer promotions.

RTE popcorn sales have grown steadily over the past few years with 1989 sales reaching $368 million, an increase of 22 percent over 1988. Cheese-flavored varieties dominate the popcorn segment since large retail displays have spawned much of its success. White cheddar-flavored popcorn comprises 8.5 percent of the category and has shown a tremendous sales increase of just over a third from 1988. Sales of caramel popcorn, which are almost 12 percent of the market, have dropped 14 percent.

However, caramel popcorn is a winner in the microwaveable popcorn category. America's love affair with the microwave has boosted microwave popcorn sales close to $822 million, an increase of 4.9 percent from 1988 which was an incredible increase of 28.4 percent over 1987.

Meanwhile, the perennial American classic, potato chips, stumbled with an 0.8 percent dip in shipments. A potato shortage was responsible. The slack was taken up by corn chips, which posted a 22 percent gain over 1988 with 1989 sales of $635.7 million. Regular and ridged chips (three quarters of the segment) remained flat; while kettle-style potato chips (one percent of the segment) jumped 17 percent in sales.

Pretzels continue to show strong growth with regional preferences fanning demand for a variety of configurations which have all shown double digit growth: hard dough, sticks, thins, rods, nuggets and minis. Sales for pretzels in 1989 totaled over $557 million, up more than 18 percent from 1988.



Sales for soft drinks have been bubbly, at a rate of $23.7 billion for 1989. (Source: New York Seltzer Co.)

Global markets are opening up quicker than you can snap open a can of cola and beverage manufacturers are quenching their thirst for opportunity in both Eastern Europe and Asia. Clearer access to world markets has been a boon for Coca-Cola which gets 75 percent of its profits from overseas markets and Pepsi-Cola which makes 20 percent of its profits abroad. A receptive global market has also been a godsend to the alcoholic beverage industry, which has been able to continue increasing production while domestic sales have decreased.

Soft drinks have been bubbling at a rate of $23.7 billion in 1989, according to estimates by the U.S. Department of Commerce provided by Business Trend Analysts (BTA), Commack, NY. And sales are projected to almost double by 1998 to $42 billion.

Diet beverages have been responsible for much of the industry's growth with low-calorie drinks comprising more than 27 percent of total industry volume in 1989, according to BTA. Per capita consumption of diet soft drinks is expected to grow 5.2 percent annually into the next decade to reach 20 gallons by 1998.

Non-caloric sweeteners have eliminated the aftertaste often attributed to

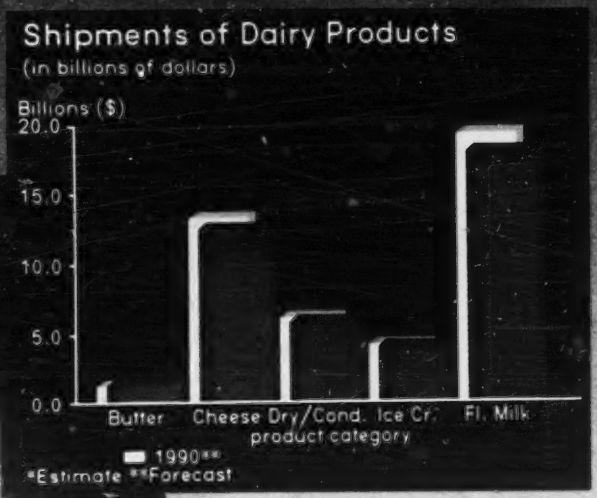
Analysts say the lack of interest in hard liquor predates the current nutrition craze – that instead most of today's younger consumers never acquired a taste for spirits. Also, demand for wine coolers has dried up since 1988, accounting for most of last year's sour wine sales. This dry spell is expected to spur mergers of wine-producing companies.

The picture isn't as dark for beer producers. Many former import-beer drinkers are turning toward domestic brands. Some industry observers have said that import sales are declining because the mystique surrounding imports have fizzled since many overseas firms now operate breweries in the U.S.

Meanwhile, fascination with the exotic has found a new outlet, as demonstrated by the bursting market for juice and juice-drinks. Flavors, such as kiwi, guava and other tropical favorites, have fanned much of the passion for these beverages.

In fact, over the next five years, the $10.9 billion market is expected to repeat the 35 percent growth achieved from 1983 to 1988, according to Find/SVP, a New York-based market research firm.

DAIRY PRODUCTS



The dairy industry boasted a favorable year in 1989 with an increase of 3.3 percent in product shipments. Cheese products lead the way with a 13.5 percent increase in shipments. (Photo source: Dohler; chart source: U.S. Department of Commerce; 1990 U.S. Industrial Outlook.)

The dairy industry is unique in that one of its major products, milk, is both a principal ingredient and major end product of the market. The *U.S. Industrial Outlook* reports that the dairy industry had a favorable year in 1989 and measured in constant dollars, total value of dairy product shipments rose 3.3 percent, ranging from a 6.4 percent gain for cheese to a 3.5 percent drop for butter. Fluid whole milk represents 78 percent of the weighted average value of materials consumed in the dairy industry. Cream and fluid skim milk follow at seven and one percent, respectively. With escalating raw milk prices, producer and retail prices for dairy products took off in 1989.

The events of 1989 are a reminder that market prices are not always determined solely by the amount produced and demand conditions, says James J. Miller, Agricultural Economist with the United States Department of Agriculture. At the Annual Agricultural Outlook Conference held last November, Miller pointed out that certain industry decisions and events turned what could have been a moderately tight market into a chaotic market with record prices.

Several of these events resulted from the federal government's buy-out programs to support the farm price of milk. The Industrials' Outlook reports that government inventories of dairy goods grew 45.8 percent to 26.9 billion pounds in 1989. Purchases of butter accounted for most of this increase. In effect, the government purchased 55.6 percent of 1989 butter production.

The biggest winner in the dairy industry in 1989 was cheese. The total value of product shipments of cheese jumped 13.5 percent in 1989. Changes ranged from a 16.9 percent increase for natural cheeses to a 0.3 percent gain for cheese substitute, says the Outlook.

Per capita consumption of all cheese fell 1.2 percent. But, specialty-type cheeses showed the best growth with Italian types leading the way, increasing 6.3 percent. Mozzarella accounted for much of this increase since it is a main ingredient for pizza. Ricotta cheese rose 7.5 percent and cream cheese jumped to 9.3 percent because of the popularity of its use on bagels.

In other areas, the Outlook reports the value of product shipments for ice cream and frozen desserts rose 3.4 percent. Yogurt products also experienced healthy growth as the value of shipments jumped 10 percent in 1989; per capita consumption rose 3.1 percent. Frozen yogurt, in particular, rang up a whopping $1.2 billion in sales in 1989, according to FIND/SVP, New York. The value of these sales reflects a 516 percent increase over 1985, or a compound annual growth rate of 57.6 percent. Sales growth, says FIND/SVP, has been due to two major factors: an increase in the number of outlets offering frozen yogurt and an increase in average store sales of frozen yogurt. FIND/SVP predicts that the growth in the frozen yogurt market is expected to level off in 1991 or 1992. The company also expects to see a wider variety of novelty products such as frozen yogurt-based bon bons.

STATE OF THE FOOD INDUSTRY

CONFECTIONS

Trends of confectionery products (in millions of dollars)

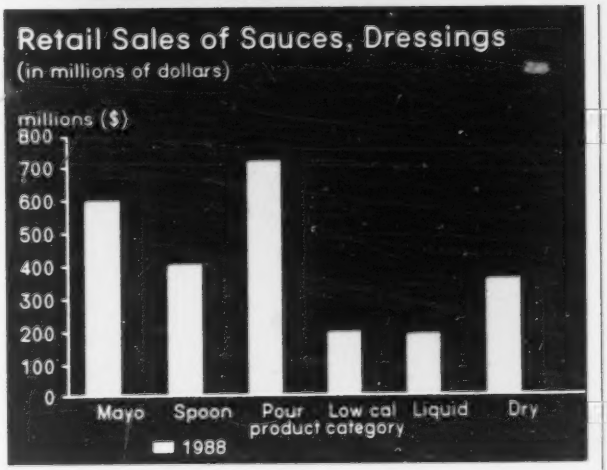
	1988[1]	1989[1]	1990[2]	Percent change 1988-89
Industry data:				
Value of shipments	7,708	8,145	8,634	5.7
Value of shipments (1987$)	7,632	7,809	8,062	2.3
Product data:				
Value of shipments	7,692	8,138	8,627	5.8
Value of shipments (1987$)	7,616	7,802	8,055	2.4

[1]Estimated; [2]Forecast.

Source: U.S. Department of Commerce; 1990 U.S. Industrial Outlook

The confectionery segment of the food industry is still proving sweet for manufacturers as the value of industry shipments for candy and other confectionery products was an estimated $8.1 billion in 1989, an increase of 5.7 percent over 1988 figures, according to the *1990 U.S. Industrial Outlook*. The Outlook reports that in 1989, U.S. candy consumption was estimated at 4.8 billion pounds, a 2.6 percent rise over 1988 consumption. Chocolate candy consumption in 1989 increased an estimated 2.5 percent to 2.5 billion pounds while consumption of nonchocolate candy was estimated to increase 2.7 percent over 1988 to 2.1 billion pounds. Consumption of candy not specified by kind rose 2.6 percent in 1989.

DRESSINGS & SAUCES



Source: Arbitron/SAMI.

In 1989, dressings and sauces accounted for $3.3 billion in retail sales, a six percent increase from 1988, reports Arbitron/Selling Areas-Marketing (New York). Sales of these products have been and will most likely continue to be affected by health trends: low fat, low calorie, and cholesterol-free. Trends also indicate that the popularity of ethnic sauces continues as all ethnic categories grew last year. A combined average of Oriental, Mexican, and Italian sauces grew 15 percent in 1989, reports the Specialty Food Tracking Index (Florham Park, NJ). The runaway winner in this category for 1989 is the low/reduced calorie dressing segment with $252 million in sales, which reflects a whopping 23 percent increase over 1988 figures. Pourable dressings maintained their top slot with $757 million in sales.

CANNED, SHELF FOODS

Trends and forecasts: canned foods (in millions of dollars)

	1988[1]	1989[1]	1990[2]	Percent change 1988-89	Percent change 1989-90
Industry data:					
Value of shipments	25,403	28,305	–	11.4	–
Value of shipments (1987$)	24,252	25,101	25,347	3.5	1.0
Product data:					
Value of shipments	24,548	27,427	–	11.7	–
Value of shipments (1987$)	23,445	24,307	24,526	3.7	0.9

[1]Estimated; [2]Forecast.

Source: U.S Department of Commerce; 1990 U.S. Industrial Outlook.

The microwaveable, shelf stable food sector continues to expand as the push by consumers for convenience continues. (Source: Pet, Incorporated.)

The shelf stable market continues to march forward in the food industry as the value of production of canned fruits, vegetables, and processed food specialties grew 11.4 percent to $28.3 billion in 1989, reports the Department of Commerce in the *1990 U.S. Industrial Outlook*. In constant dollars, shipments of these products increased 3.5 percent. Areas experiencing the most significant growth included baby food, tomato products and other sauces, salad dressings, dried fruits and soups, and aseptically packaged foods. The popularity of basic canned fruits and vegetables, however, continued to decline as consumers' preference for both fresh and frozen goods increased.

The Department of Commerce reports that per capita consumption of canned fruits declined from 22 percent of total fruit consumption during the 1975-79 period to 16 percent during the 1985-88 period; fresh fruit consumption increased from 65 percent to 70 percent during the same time periods. Per capita consumption of vegetables followed a similar pattern during this same time frame. Canned vegetables declined from 50 percent to 44 percent, while consumption of fresh vegetables rose from 42 percent to 48 percent.

The Commerce Department reports the sales volume for baby food increased almost five percent over 1988. Companies in this sector will be competing for the share of the growing infant population, introducing new products which feature low salt and/or no sugar added preparations.

The convenience push by consumers is on and unquestionably shows in sales of microwaveable, shelf stable foods in plastic packaging. And those who place convenience at the top of their list in meal purchases are willing to pay premium prices for it, according to the business research firm FIND/SVP (New York).

A recent study by FIND/SVP predicts consumer demand for microwave food convenience will sustain a compound annual growth rate of nine percent between 1989 and 1994, to bring the microwaveable foods market from $2.5 billion in 1989 to $3.9 billion in 1994. These figures reflect sales of all microwaveable foods sold from grocery as well as non-grocery channels.

According to Peter Allen, FIND/SVP's Vice President, Market Research Reports, the study considered prepared entrees and popcorn to be the most dynamic segment among shelf stable microwaveable foods. But, Allen points out that "the segment's entree market is in a state of flux, as it begins to subdivide into adult/upscale and children's/downscale segments, with different formulations, packaging, and marketing for each product group."

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